

## CLAIMS:

1. A communication system (1) comprising a transmitter (2), a receiver (3), and an up/down link communication channel (4, 6) arranged for data communication from the transmitter (2) through the up link communication channel (4) to the receiver (3), whereby the communication system (1) is further arranged to feedback data from the receiver (3) through the down link communication channel (6) to the transmitter (2), characterized in that the receiver (3) comprises a bad frame indicator (5) for providing a bad frame indication (BFI) upon receipt of a corrupted frame, which is present in synchronized data communicated over the up link communication channel (4); and that the transmitter (2) comprises resynchronization means (7) coupled to the down link communication channel (6) for receiving BFI related data and in response thereto recommencing data communication over the up link communication channel (4), in accordance with a resynchronization procedure, which starts from a predetermined state.

2. The communication system (1) according to claim 1, characterized in that the transmitter (2) and receiver (3) comprise an encoder state machine (ENC) and decoder state machine (DEC) respectively, whereby at least the encoder state machine (ENC) is brought back to said predetermined state at recommencing data transmission.

3. The communication system (1) according to one of the claims 1 or 2, characterized in that the resynchronization means (7) include a mutually coupled resynchronization encoder decoder pair (15, 16) for implementing a possible resynchronization procedure.

4. The communication system (1) according to one of the claims 1-3, characterized in that the resynchronization means (7) are arranged for effecting at least a partial reset of the transmitter (2) upon receipt of BFI related data from the receiver (3).

5. The communication system (1) according to claim 4, characterized in that the bad frame indicator (5) is arranged for providing BFI related data containing

acknowledgement information ( $A_{N-1}$ ) about the correct receipt of at least subsets of a frame and/or erasure information about the received bits in the frame.

6. A transmitter (2) for application in a communication system (1) according to one of the claims 1-5, the communication system (1) comprising the transmitter (2), a receiver (3), and an up/down link communication channel (4, 6) arranged for data communication from the transmitter (2) through the up link communication channel (4) to the receiver (3), whereby the communication system (1) is further arranged to feedback data from the receiver (3) through the down link communication channel (6) to the transmitter (2), characterized in that the receiver (3) comprises a bad frame indicator (5) for providing a bad frame indication (BFI) upon receipt of a corrupted frame, which is present in synchronized data communicated over the up link communication channel (4); and that the transmitter (2) comprises resynchronization means (7) coupled to the down link communication channel (6) for receiving BFI related data and in response thereto recommencing data communication over the up link communication channel (4), in accordance with a resynchronization procedure, which starts from a predetermined state.

7. A receiver (3) for application in a communication system (1) according to one of the claims 1-5, the communication system (1) comprising a transmitter (2), the receiver (3), and an up/down link communication channel (4, 6) arranged for data communication from the transmitter (2) through the up link communication channel (4) to the receiver (3), whereby the communication system (1) is further arranged to feedback data from the receiver (3) through the down link communication channel (6) to the transmitter (2), characterized in that the receiver (3) comprises a bad frame indicator (5) for providing a bad frame indication (BFI) upon receipt of a corrupted frame, which is present in synchronized data communicated over the up link communication channel (4); and that the transmitter (2) comprises resynchronization means (7) coupled to the down link communication channel (6) for receiving BFI related data and in response thereto recommencing data communication over the up link communication channel (4), in accordance with a resynchronization procedure, which starts from a predetermined state.